

**Exercises 18:** 49, 50, 51, 54, 55

**Exercises 19:** 9,10, 23, 26, 30

**Exercises 21:** 2, 5

**Additional exercises:**

1. Every field has a subfield which is isomorphic (as a field) to  $\mathbb{Z}_p$  or  $\mathbb{Q}$ .